

Search History

STN
(HCAPLW, FUSPEC 20710, USPAT 4)
(1/28/2008)

=> d 17 1-2 abs, bib

L7 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2008 ACS on STN
AB Methods for treating nominally pure crystals having nonlinear optical properties, especially a lithium niobate crystal or lithium tantalate crystal, and which contains foreign atoms which cause absorption of light (particularly Fe²⁺ ions) in a residual concentration of <20 ppm in which a thermal oxidation causes the atoms to attain a higher oxidation state (e.g., Fe³⁺) while the excess electrons are eliminated from the crystal by applying a predetd. voltage are described in which the crystal is heated at a rate that increases by <3° per min to a maximum temperature that lies above a predefined threshold value and below the Curie temperature of the crystal, the threshold value being defined by the temperature at which the migration of ions contained in the crystal (particularly Li⁺ ions) to the surface of the crystal ceases and being determined based on preceding tests on the same type of specifically doped reference crystals. Oxide nonlinear optical crystals treated as described above, and systems (e.g., frequency doublers and optical parametric oscillators) using the crystals are also described.

AN 2007:1143101 HCAPLUS
DN 147:436353

TI Treatment of crystals for the prevention of optical damage
IN Buse, Karsten; Falk, Matthias; Woike, Theo
PA Deutsche Telekom A.-G., Germany
SO PCT Int. Appl., 27pp.
CODEN: PIXXD2

DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007112719	A1	20071011	WO 2007-DE468	20070315
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GT, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	DE 102006016201	A1	20071011	DE 2006-102006016201	20060406
PRAI	DE 2006-102006016201	A	20060406		
RE.CNT	3	THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT			

L7 ANSWER 2 OF 2 USPATFULL on STN
AB A method for the treatment of a crystal, such as a lithium niobate crystal or lithium tantalate crystal, having nonlinear optical properties. The crystal comprises foreign atoms which bring about specific absorption of radiated light. The foreign atoms are transformed into a lower valent state by means of oxidation. Electrons, which are released during oxidation, are discharged from the crystal with the aid of an external power source.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 2007:177187 USPATFULL

TI Treatment of crystals in order to avoid light-induced modifications of
the refractive index
IN Buse, Karsten, Bonn, GERMANY, FEDERAL REPUBLIC OF
Falk, Matthias, Bonn, GERMANY, FEDERAL REPUBLIC OF
Peithmann, Konrad, Bonn, GERMANY, FEDERAL REPUBLIC OF
PI US 2007155004 A1 20070705
AI US 2004-597199 A1 20040930 (10)
WO 2004-DE2176 20040930
20060714 PCT 371 date
PRAI DE 2004-10200400210920040114
DT Utility
FS APPLICATION
LREP DARBY & DARBY P.C., P. O. BOX 5257, NEW YORK, NY, 10150-5257, US
CLMN Number of Claims: 12
ECL Exemplary Claim: 1-11
DRWN 2 Drawing Page(s)
LN.CNT 317
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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(FILE 'HOME' ENTERED AT 12:02:32 ON 18 JAN 2008)

FILE 'HCAPLUS, INSPEC, JAPIO, USPATFULL, USPATOLD, USPAT2' ENTERED AT
12:02:48 ON 18 JAN 2008

L1 16607 S (CRYSTAL#) (8A) (NONLINEAR (8A) OPTIC?)
L2 2987 S (FOREIGN (6A) ATOM#)
L3 754 S (REMOV? OR ELIMINAT? OR RID? OR DECREAS?) (8A) (ELECTRON# (8A) CR
L4 19859 S (LITHIUM (W) TITANATE OR LITAO3 OR LITHIUM (W) NIOBATE OR LINBO3)
L5 614 S (CONVERT? OR ALTER? OR CHANG?) (8A) (ATOM# (6A) VALENC?)
L6 1 S L1 AND L2 AND L3 AND L5
L7 2 S L1 AND L2 AND L3 AND L4

=>

=> d 18 1-3 abs, bib

L8 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN
AB Methods for treating nominally pure crystals having
nonlinear optical properties, especially a lithium
niobate crystal or lithium tantalate crystal,
and which contains foreign atoms which cause
absorption of light (particularly Fe²⁺ ions) in a residual concentration of <20
ppm in which a thermal oxidation causes the atoms to attain a higher oxidation
state (e.g., Fe³⁺) while the excess electrons are eliminated from the
crystal by applying a predetd. voltage are described in which the crystal
is heated at a rate that increases by <3° per min to a maximum temperature
that lies above a predefined threshold value and below the Curie temperature of
the crystal, the threshold value being defined by the temperature at which the
migration of ions contained in the crystal (particularly Li⁺ ions) to the
surface of the crystal ceases and being determined based on preceding tests on
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nonlinear optical crystals treated as
described above, and systems (e.g., frequency doublers and optical
parametric oscillators) using the crystals are also described.

2007:1143101 HCAPLUS

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	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	DE 102006016201	A1	20071011	DE 2006-102006016201	20060406
PRAI	DE 2006-102006016201	A	20060406		
RE.CNT	3	THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT			

L8 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN
AB The invention relates to a method for the treatment of a crystal
, in particular a lithium niobate crystal or
lithium tantalate crystal, having nonlinear
optical properties. The crystal comprises foreign
atoms which cause specific absorption of radiated light. The
foreign atoms are transformed into a lower valence state
by oxidation brought on by, e.g., heat treatment and application of an elec.
field. Electrons, which are released during oxidation, are discharged from
the crystal with the aid of an external power source.

AN 2005:673440 HCAPLUS

DN 143:163625

TI Treatment of crystals to avoid light-induced modifications of the

refractive index and nonlinear optical elements
containing the crystals

IN Buse, Karsten; Falk, Matthias; Peithmann, Konrad

PA Deutsche Telekom A.-G., Germany

SO PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005068690	A1	20050728	WO 2004-DE2176	20040930
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	DE 102004002109	A1	20050811	DE 2004-102004002109	20040114
	EP 1706523	A1	20061004	EP 2004-786888	20040930
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			
	JP 2007519951	T	20070719	JP 2006-548085	20040930
	US 2007155004	A1	20070705	US 2006-597199	20060714
PRAI	DE 2004-102004002109	A	20040114		
	WO 2004-DE2176	W	20040930		

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 3 . USPATFULL on STN

AB A method for the treatment of a crystal, such as a lithium niobate crystal or lithium tantalate crystal, having nonlinear optical properties. The crystal comprises foreign atoms which bring about specific absorption of radiated light. The foreign atoms are transformed into a lower valent state by means of oxidation. Electrons, which are released during oxidation, are discharged from the crystal with the aid of an external power source.

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AN 2007:177187 USPATFULL

TI Treatment of crystals in order to avoid light-induced modifications of the refractive index

IN Buse, Karsten, Bonn, GERMANY, FEDERAL REPUBLIC OF
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Peithmann, Konrad, Bonn, GERMANY, FEDERAL REPUBLIC OF

PI US 2007155004 A1 20070705

AI US 2004-597199 A1 20040930 (10)

WO 2004-DE2176 20040930
20060714 PCT 371 date

PRAI DE 2004-10200400210920040114

DT Utility

FS APPLICATION

LREP DARBY & DARBY P.C., P. O. BOX 5257, NEW YORK, NY, 10150-5257, US

CLMN Number of Claims: 12

ECL Exemplary Claim: 1-11

DRWN 2 Drawing Page(s)

LN.CNT 317